

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD
TREE/SHRUB SITE PREPARATION

(Ac.)

CODE 490

DEFINITION

Treatment of areas to improve site conditions for establishing trees and/or shrubs.

PURPOSE

This practice may be applied for one or both of the following purposes:

1. To encourage natural regeneration of desirable woody plants;
2. To permit artificial establishment of woody plants.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies on all lands needing treatment to establish trees and/or shrubs. Typical sites include abandoned crop fields, pastures, and forestland that was recently harvested.

CRITERIA

Select an appropriate site preparation method to achieve the intended purpose, while protecting desirable vegetation and site and soil conditions. Use other complementary practices and measures as necessary to control erosion and runoff, and to minimize soil compaction.

The method, intensity, and timing of site preparation will match the limitations of the site, available equipment, and the requirements for establishing the desired woody species.

Site preparation for timber production shall comply with requirements of Delaware's Forestry Erosion and Sedimentation Law (Delaware Code Title 3, Chapter 10, Subchapter

VI) and Seed Tree Law (Delaware Code Title 3, Chapter 10, Subchapter V), as applicable.

Slash and debris shall be removed, treated, or eliminated as appropriate. Remaining slash and debris shall not create habitat for or harbor harmful levels of pests and shall not hinder equipment operations or create an undue fire hazard.

Measures, including the use of equipment, shall be implemented to control or protect against locally invasive and noxious species that may arise from site preparation activities. Noxious weeds shall be controlled as required by state law. If pesticides are used, refer to the conservation practice standard for Integrated Pest Management (595).

Note: Specific programs may dictate criteria in addition to, or more restrictive than, those specified in this standard.

CONSIDERATIONS

Assess site conditions, including slopes and soil types, drainage patterns, identification of any sensitive or unusual resources, adjacent land uses, and existing vegetation on the site and in adjacent areas, including any noxious weeds that may be present.

Depending on site conditions, one or more of the following methods of site preparation may be used:

1. Light mechanical (e.g., bush-hogging and tillage) – Using light to moderate-size machinery (e.g., agricultural equipment) to clear above-ground vegetation, rip/cut/lift residual root systems, incorporate organic matter, and reduce soil compaction;

2. Heavy mechanical (e.g., shearing, root raking, bulldozing, and piling) – Using heavy equipment to remove residual trees and roots after forest harvest and pile logging debris;
3. Drum chopping – Using a tractor or bulldozer with drum roller to knock down and chop up residual trees and debris after forest harvest;
4. Prescribed burning – To reduce logging debris or other undesirable vegetation;
5. Herbicide treatment – Applying herbicides by hand-application (e.g., backpack sprayer, hack and squirt, etc.), and/or aerial or ground-based mechanized equipment in order to kill undesirable vegetation;
6. Hand site preparation – Using basic hand tools such as shovels, rakes, and chain saws to remove undesirable vegetation;
7. Bedding – Mounding soil into rows to create tree planting beds on sites with a high water table.

Consider impacts on wildlife species, habitat, and aesthetics when selecting site preparation methods.

Consider that particulates, smoke, and other air pollutants generated by site preparation may have on-site and off-site effects on air quality.

This practice has the potential to affect National Register listed cultural resources or eligible (significant) cultural resources. These may include archeological, historic, or traditional cultural properties. Care should be taken to avoid adverse impacts to these resources. Follow NRCS state policy for considering cultural resources during planning.

PLANS AND SPECIFICATIONS

Plans and specifications for this practice shall be prepared in accordance with the previously listed criteria. Plans and specifications shall contain sufficient detail to ensure successful implementation of this practice, and may be recorded in narrative form in a forest management plan, on Implementation

Requirements (IR) worksheets, or other approved forms.

The forest management plan and/or completed 490 IR worksheet can serve as the plan and specifications for this practice.

The following items shall be addressed, as appropriate:

1. Purpose(s) of site preparation;
2. Method(s) of site preparation used;
3. Timing of application;
4. Identify any environmentally sensitive areas (e.g., water courses, water bodies, wetlands) present on or bordering the project, and any herbicide application setbacks and/or other water quality buffers, if applicable;
5. Erosion and sediment control measures (Best Management Practices), special requirements, and mitigation measures, if applicable.

OPERATION AND MAINTENANCE

An Operation and Management (O&M) plan shall be prepared and is the responsibility of the client to implement. The forest management plan and/or IR worksheet may serve as the management plan, as well as supporting documentation, and shall be reviewed with and provided to the client.

At a minimum, the following components shall be addressed in the O&M plan, as applicable:

1. Inspect and maintain erosion and sediment control measures, as necessary;
2. If herbicides are used, read and follow label directions. Labels include requirements for mixing/loading and application setbacks from wells, water courses, natural or impounded water bodies, wetlands, and other environmentally sensitive areas;
3. Control locally invasive and noxious plants, as necessary. Control noxious weeds as required by state law;

4. Control access by vehicles or equipment during and after site preparation to minimize erosion, compaction, and other site impacts, to the extent feasible. Refer to the conservation practice standard for Use Exclusion (472).

SUPPORTING DATA AND DOCUMENTATION

The following is a list of the minimum data and documentation to be recorded in the case file:

1. Extent of practice in acres, field number where the practice is located, and the location of the practice marked on the conservation plan map;
2. Assistance notes. The notes shall include dates of site visits, name or initials of the person who made the visit, specifics as to alternatives discussed, decisions made, and by whom;
3. WIN-PST for herbicide treatment, if applicable;
4. Completed IR worksheet, and copy of the forest management plan (if applicable).

REFERENCES

1. Delaware Department of Agriculture, Forest Service. October, 2006. *Delaware's Forestry Best Management Practices Manual*.
2. Delaware Department of Agriculture, Forest Service. 2005. *Delaware Wood Industry, Primary and Secondary Directory*.
3. Delaware, State of. *Delaware Code, Title III, Agriculture, Department of Agriculture, Chapter 10, State Forestry*.
4. North Carolina Forest Service. 2006. *North Carolina Forestry Best Management Practices Manual to Protect Water Quality, Chapter 10, Site Preparation and Reforestation*.
5. USDA, Natural Resources Conservation Service. *Conservation Practice Standards. Delaware Field Office Technical Guide, Section IV*.